

WHAT IS CLAIMED IS:

1           1.     A rotary power hand tool comprising:

2           an elongated generally cylindrical plastic housing having at least two mating  
3 plastic sections that fit together to form a unitary structure, said housing having at least a  
4 main portion, a front end portion, and a front opening in said housing;

5           a motor mounted at least partially within said main housing portion and having an  
6 elongated generally cylindrical motor output shaft extending from said main portion at  
7 least to said front end portion, said motor output shaft having at least one hole in the side  
8 surface thereof;

9           a locking member located in said front end portion and having an elongated pin  
10 portion slideable in a channel defined by at least one channel wall formed in said plastic  
11 front end portion, for engaging the output shaft hole to lock said motor shaft from  
12 rotation;

13          a front end metal portion having at least two mating sections configured to fit over  
14 said plastic front end portion, said metal portion having a pair of spaced apart structural  
15 ribs oriented generally transverse to the output shaft and extending inwardly toward the  
16 output shaft, said ribs terminating on opposite sides of said channel wall.

1           2.     A rotary power hand tool as defined in claim 1 further comprising a  
2 cylindrically shaped nose portion located at the outer end portion of said front end portion  
3 for receiving accessory attachments to said hand tool.

1           3.     A rotary power hand tool as defined in claim 1 wherein said locking  
2 member comprises a button portion having an elongated pin configured to enter said hole.

1           4.     A rotary power hand tool as defined in claim 3 wherein said button portion  
2     has a wide configuration convenient for a user to depress, said button portion having an  
3     elongated cylindrical pin portion extending therefrom, said hole having a cylindrically  
4     shape sized to receive said pin portion.

1           5.     A rotary power hand tool as defined in claim 4 wherein said button portion  
2     having a cylindrical extension with the pin portion extending therefrom, said channel  
3     being cylindrically shaped and sized to receive said cylindrical extension therein.

1           6.     A rotary power hand tool as defined in claim 4 wherein said metal portion  
2     has a narrow recess therein adjacent said button portion, said button portion having a  
3     flange that extends into said recess and limits outward movement of said button portion.

1           7.     A rotary power hand tool as defined in claim 1 wherein said channel has a  
2     reduced diameter adjacent the output shaft, said tool further comprising a spring located  
3     in said channel for biasing said locking member away from the output shaft.

1           8.     A rotary power hand tool as defined in claim 1 wherein said structural ribs  
2     are at least in near contact with said channel wall.

1           9.     A rotary power hand tool comprising:  
2             an elongated generally cylindrical plastic housing having at least two mating  
3     plastic sections that fit together to form a unitary structure, said housing having at least a  
4     main portion, a front end portion, and a front opening in said housing;  
5             a motor mounted at least partially within said main housing portion and having an  
6     elongated generally cylindrical motor output shaft extending from said main portion at

7 least to said front end portion, said motor output shaft having at least one hole in the side  
8 surface thereof;

9 a locking member located in said front end portion and having an elongated pin  
10 portion slideable in a channel for engaging the output shaft hole to lock said motor shaft  
11 from rotation;

12 a front end metal portion having at least two mating sections configured to fit over  
13 said plastic front end portion, said metal portion having a pair of spaced structural ribs  
14 oriented in a plane generally transverse to the output shaft and extending inwardly toward  
15 the output shaft, said ribs terminating on opposite sides of said channel in position to  
16 absorb stress applied to said locking member when rotational torque is applied to the  
17 output shaft with said elongated pin portion engaged in the output shaft hole.

1 10. A rotary power hand tool as defined in claim 9 further comprising a  
2 cylindrically shaped nose portion located at the outer end portion of said front end portion  
3 for mounting accessory attachments to said hand tool.

1 11. A rotary power hand tool as defined in claim 9 wherein said locking  
2 member comprises a button portion having an elongated pin configured to enter said hole.

1 12. A rotary power hand tool as defined in claim 11 wherein said button  
2 portion has a wide configuration convenient for a user to depress, said button portion  
3 having an elongated cylindrical pin portion extending therefrom, said hole having a  
4 cylindrically shape sized to receive said pin portion.

1           13.    A rotary power hand tool as defined in claim 12 wherein said button  
2   portion having a cylindrical extension with the pin portion extending therefrom, said  
3   channel being cylindrically shaped and sized to receive said cylindrical extension therein.

1           14.    A rotary power hand tool as defined in claim 12 wherein said metal portion  
2   has a recess therein adjacent said button portion, said button portion having a flange that  
3   extends into said recess and limits outward movement of said button portion.

1           15.    A rotary power hand tool as defined in claim 9 wherein said channel has a  
2   reduced diameter adjacent the output shaft, said tool further comprising a spring located  
3   in said channel for biasing said locking member away from the output shaft.